



Vedic Shanti Mantra reveals universal Truths of the physical world

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Abstract

Proper understanding the Shanti-Mantra, 'Om Purnnam-Adah ---' is linked to the understanding of Brahman and the interactions of background radiation particles in finer domain (below micro domain) with the fine structure of mental faculty which may be interpreted as the Divine consciousness of mind. Similar to the existence of microstructure of a macro body, the microstructure also has micro-microstructure comprising micro-micro particles whose matter value has remained unnoticed due to limitations of science. The exchange of micro-micro-particles from one micro-micro structure (individual mental faculty) with the micro-micro-structure of the universe forms the link between the individual consciousness and the supreme consciousness. Brahman, the basic formless interaction of mass and space discussed elsewhere by this author does not refer to physical mass or physical space or matter (mass-space integral system) but refers only to the Divine instinct of interaction between mass and space. Thus, Brahman, the supreme reality/ultimate truth is non-physical but present in all physical existences of the universe because all physical things are mass-space integral systems. The Shanti-Mantra clarifies the qualities of Brahman through mathematical expression however this mathematics fouls with normal mathematical operation. But the fouling is only apparent and it disappears after proper understanding of the significance of Vedic Mantra. This paper explains why Om is associated in the beginning and at the end of the Shanti Mantra and describes the existing accepted interpretations Vedic Shanti Mantra as well as the author's scientific interpretation of the Mantra which reveals many laws of nature and helps unification of sciences.

Keywords: *Shanti-Mantra, Brahman, Divine consciousness, Micro-micro-domain, Mass-space-interaction, Laws of nature, Unification of science.*

Understanding the significance of Om

In solving the problems of science, the mathematical equations are very useful however; knowing the basis of the equation increases the confidence on its application and renders further new scope of application including upgrading of the equation from local to universal. Likewise, there is difference between chanting of any Mantra with and without understanding the meaning & significance of the Mantra and its action on the body. For proper understanding the significance and the value of Shanti Mantra, it is



necessary to realize the significance of Brahman and other important terms used in the mantra. The term Om is used both at starting and ending which shows its importance. Om itself is a mantra uttered as 'ōm'. In Hinduism and other traditions, it is a sacred syllable considered as the primordial sound of the universe, and chanting it is believed to bring peace, clarity, and unity, promoting calmness, reducing stress, and enhancing spiritual awareness. The vibrations generated during chanting Om have a soothing effect on our nervous system. It is said that regularly chanting Om mantra reduces stress, anxiety, restlessness and promotes being calm. Chanting Om thus is believed to align a person with the Divine, and promotes a sense of connection with the supreme consciousness.

The present author makes a humble attempt to supplement scientific justification on the above faith-based benefits in chanting 'Om'. Thinking on a specific topic produces specific thought promoting vibrations of the specific functionally linked components of mental faculty which produce stress and strain of the components. Therefore, one would ordinarily expect the stress and strain of mental faculty caused by the thought activity to relax fully soon after the thinking stops. But this does not happen in reality because some residual stress and strain remains in the mental faculty even after completion of any thought activity. Any worry assisted with thought thereby aggravates pain due to fatigue of specific components of mental faculty. For better functioning of the thought activity, the residual stress and strain of mental faculty is required to be normalized before initiating any new thought. Stress removal improves the quality of consciousness of mind. It is more so in contemplating on serious topics such as in linking with God, making devotional prayer to God with concentration, trying to understand the ultimate truth/supreme reality/Brahman etc. Again, any deep contemplation on a specific topic produces directional residual stress & strain of higher degree which has to be normalized soon after the deep thought-activity for improving the efficiency of mental faculty for subsequent thought. While chanting Om, the nerve junction in our belly (Navi) is stretched which influences the nervous system of our body and the vocal cord and results in sound production in multiple frequencies (near continuous spectra). Thus, the sound produced in chanting 'Om' has near-continuous spectra which are effective in relieving any directional residual stresses and strains of the mental faculty. Due to the stress relieving nature of Om mantra, it is associated with other mantras in the beginning and at the end. Enchanting Om several times helps to reduce the stress induced diseases. The normalization process is not confined to mental faculty alone. For example: Normalization of steel components is a prerequisite operation in tempering and hardening processes of steel. The eye-stress produced by arc discharge lights and gas discharge tube lights can be reduced by associating an additional light of continuous spectra. Thus, it is advisable to switch on additional incandescent light while seeing the gas discharge TV.



The mental faculty always receives weak signals from the outer world even when our consciousness fails to capture the same. The hair on head serves as a plurality of parallel antennas hence, the capture of radiation from the outer world is more effective for Rishis with longer antennas. The exchange of background radiation from the outer world and the radiation from mental faculties always maintain the natural link between the inner world and the outer world. It is a fact that we are able to think about the outer world because the background radiation of the outer world serves as messenger particles. The ordinary consciousness fails to detect the weak universal links. Deep thinking on Brahman, the supreme reality or trying to realize the significance of Shanti Mantra during chanting require a stress-free calm state of the mental faculty for effectiveness of higher levels of thoughts. This is something like the effective filtering of noise is needed for producing clear sound and clean picture on TV screen.

Existing interpretations of the Shanti Mantra

The mantra is a profound verse from the Bṛhadāraṇyaka Upaniṣad [1], often recited at the beginning or end of spiritual practices. The mantra is given below.

ॐ पूर्णमदःपूर्णमिदं पूर्णात्पूर्णमुदच्यते ।
पूर्णस्य पूर्णमादाय पूर्णमेवावशिष्यते ॥
ॐ शान्तिः शान्तिः शान्तिः ॥

Transliteration: Ompūrṇam-adahpūrṇam-idam pūrṇātpūrṇam-udacyate
pūrṇasyapūrṇam-ādāyapūrṇam-evāvaśiṣyate
Om śhāntiḥśhāntiḥśhāntiḥ

Literal Translation

Om – the sacred sound.

Purnamadah – That (Brahman/the Absolute) is whole (infinite/complete).

Purnamidam – This (the manifested universe) is also whole.

Purnatpurnamudacyate – From that Whole, this Whole arises.

Purnasyapurnamadaya – Even when the Whole is taken out of the Whole,

Purnamevaavashishyate – what remains is still Whole.

Om shanti shanti shanti – Peace, peace, peace (in body, mind, and spirit; or in past, present, and future).



Different Interpretations

1. Non-Dual Vedantic View

In Advaita Vedanta, this mantra beautifully encapsulates the non-dual nature of reality:

"That" refers to Brahman – the unmanifest, eternal reality.

"This" refers to the manifest world.

Even though the world appears to emerge from Brahman, Brahman remains unchanged and complete.

The implication: All is Brahman. The world is not separate from absolute reality. It is only an appearance, and the essence remains full and indivisible.

2. Psychological Interpretation

A teacher when passes on a specific knowledge to an ignorant student, the student gains the full specific knowledge and at the same time the teacher remains full with his knowledge. The knowledge of the teacher – a specific knowledge (transferred to student) = the knowledge of the teacher. This has a simile with Brahman – Universe = Brahman.

3. Mathematical/Logical Angle

Brahman is infinite and complete whereas the universe is finite and complete. If one removes a full bucket of water from the full-sea the sea remains full. Thus, Shanti mantra may be interpreted as Brahman – Universe = Brahman.

Scientific interpretation of Brahman and the Shanti Mantra

The universe is a mass-space integral system [2]. The formless basic interaction between mass and space is the unchanging supreme reality present in both homogeneous and non-homogeneous state of mass and space [3]. In homogeneous state mass and space cannot be identified but in non-homogeneous state matter (mass-space integral system) can be identified in the form of distinct objects. A homogeneous portion of the universe characterized in one domain scale is highly non-homogeneous in finer domain scale. The space fluid becomes homogeneous if the space matter particles are not distinguished. However, when the space matter particles are properly perceived by analysis of finer structure then the homogeneous space fluid becomes non-



homogeneous. Examining the space fluid of the extra-nuclear space structure of the earth we find the atoms and molecules are the space matter particles of the space fluid. Again, examining the space fluid of the extra-nuclear space structure of a galaxy the stellar bodies become the space matter bodies of the galactic space fluid [4]. Likewise, the light particles and the field forming particles are the space matter particles in the extranuclear space structure of atoms and molecules [4]. The formless Divine-interaction between mass and space corresponds to Brahman [3]. Hence, Brahman is present in all domains of the universe and it is the cause of formation, stability and dissociation of the objects of the universe in any domain. It is also the cause of the universe as a whole. The unchangeable Brahman (the Divine Principle) is present in solid, liquid, gas, plasma or space that gives rise to different form-based properties of objects/systems depending on how mass and space are integrated with different densities of mass and space and the geometry of forms. It may be made clear, though Brahman is present in all physical forms (objects) but no form itself corresponds to Brahman. The visible universe (the observable objects of the universe) was condensed/formed/created from the invisible homogeneous mass-space system of the universe. The universe comprises the visible and the invisible components of the universe, one superimposed over the other. While defining Brahman, it is said, Brahman is the supreme reality of the universe and **beyond**. Here the world doesn't mean beyond the dimensions of the universe. It means only within the universe but beyond the reach of physical science. The term beyond refers to the finer domain of the universe whose matter value, at present, is considered zero hence, the spiritual domain. If the physical component of the universe (physical universe) is fully taken away from the universe, the universe also remains full with invisible contents (space with space matter particles of micro-micro domain). To visualize the reality, consider a chamber full with humid air. Now lower the temperature of the chamber. Visible water droplets would be seen to form in the air of the chamber. One may interpret that the visible structure comprising water droplets is created from the invisible content of the chamber. If the chamber represents the universe then the visible universe is created from the invisible universe. The universe remains full with visible and invisible objects which one may consider, the visible and invisible universes coexisting in one frame of geometry. If the visible component of the universe is taken out then also the universe remains full with invisible constituents. Referring to Fig.1, if the condensed water droplets are taken out from the chamber then the space with space matter particles expands to fill the vacancy created by removal of the water droplets thereby the chamber remains full. Because physical space is compressible, can have different space densities (space contains per unit volume) [5] [6] it expands infinitely. The above simple example provides justification in substantiating the scientific value of shanti mantra.

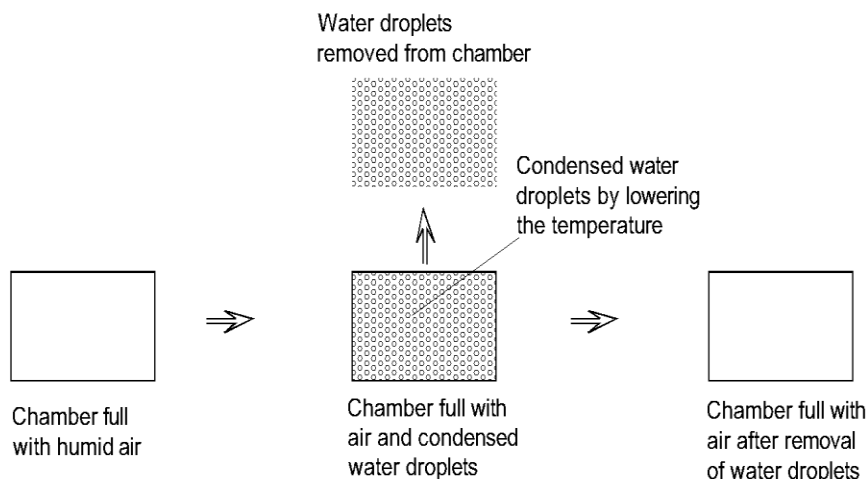


Fig.1 Chamber remain full with or without condensed water droplets

We may consider another example where a volume full with space/air is created out of another volume full with space/air as shown in Fig.2. Referring to the figure the new volume v_1 created by pulling the piston of a cylinder attached to the primary chamber of volume v . It is seen that the chamber of volume v was full with space and space matter particles prior to formation of new volume v_1 which also remained full even after creation of v_1 full with space and space matter particles. This implies removal of physical space or air from a chamber does not reduce the fullness of the chamber. In other words, space with known or unknown space matter particles can expand infinitely following the statement of Shanti Mantra. The expansion causes disturbances in the system hence there is need of Shanti Mantra.

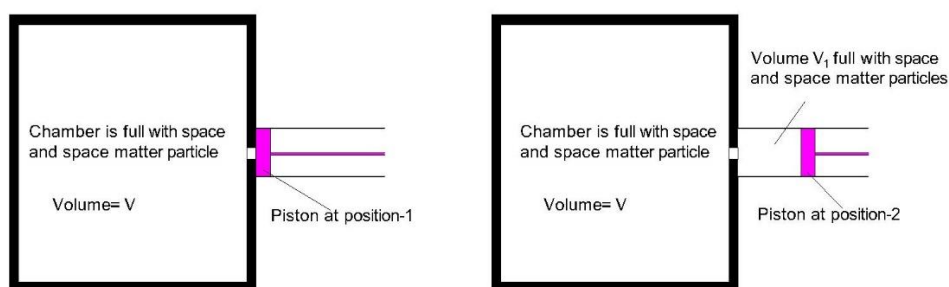


Fig.2 shows volume V_1 is created out of volume V by moving the piston

The space-matter particles of the extra-nuclear space structure of atoms and the interatomic space are micro-micro particles. If one ignores the matter value of the micro-micro particles then, the interaction of these mass-less particles would only be



characterized through consciousness in the non-material/spiritual language. If the visible components of the universe are taken away, then also the universe remains full with space containing invisible space-matter particles. The invisible space contains space matter particles of finer domain hence it is also a mass-space integral system. Therefore, the basic formless mass-space interaction (Brahman) has its presence in full form in the space of the universe even after removal of the physical universe. The formless mass-space interaction is the cause of all forms and their form-based properties. Hence Nirakara Brahma is primary and is the cause of Sakara Brahman. The invariant form of any specific God reveals the specific qualities of the specific God (form-based qualities of the God) which also speaks of the qualities of Nirakara Brahman (Brahman) due to the constant form factor. Anyone conceptualizing any specific God sees the same form of the God as experienced by others, thereby the form factor remains constant. The form factors of all Gods and Goddesses are different but the form factor of each God remains constant. Hence each God/Goddesses having their form-based specific qualities also reveals the basic qualities of Brahman in full extent.

The term adah (that) and the term idam (this) refers to far and near things respectively. The **visible component of the universe** is nearer to our perceptual/conceptual reach whereas the invisible component of the universe is far because it is difficult to conceptualize and perceive. Hence this refers to the visible universe and that refers to the invisible universe. The mass-space interaction in the micro-micro domain (domain of consciousness) is fully present in both visible and invisible domains. Hence, Brahman, the Divine Principle, present in the invisible mass-space universe is the cause of creation of the visible mass-space universe with Brahman present in it, before and after. The atman of individual and Paramatman of the universe both have invisible and unperceivable mass-space structure in finer domain which may be conceptualized from similarity of structure following uniformity of nature in different domains. Hence, Brahman, the Divine principle, is the cause of all mass-space structures in all domains which can only be attributed to the formless Divine interaction between mass and space. Thus, Brahman, the unchangeable supreme reality (Divine mass-space interaction) remains unchanged in spiritual domain (domain of Atman and Paramatma) and in materials domain (atomic domain and the domain of celestial bodies etc.). The Divine principle is invariant therefore remains in complete-form or full-form in any structure or its part. The cyclic nature of birth and death of the physical universe is described in Vedas. This author has discussed the mechanism of the cyclic universe [7]. The above analysis of Shanti Mantra reveals many physical phenomena of nature imply- they were known from the Vedic period. These include 1) Space is physical and it can expand infinitely. 2) The referred matter or space in any domain is a mass-space integral system. 3) Any object has name, form and form-based properties but the form-based property is manifested only due to the formless Divine interaction of mass and space (Brahman) and the cause of the form (formation, stability, dissociation) is



Brahman. 4) The form-based mass-space interaction property is local whereas the formless interaction of mass and space is the ultimate truth/universal truth/supreme reality/Brahman. 5) Brahman, the ultimate reality is invariant in both material and spiritual domain, therefore, there exists complete harmony between materials science and spiritual science and we need to discover the same. 6) Spiritual science deals with matters of finer domain where the matter value is only considered zero therefore it is one class of materials science. 7) The Shanti mantra contributed the basic knowledge that infinity – finite = infinity to mathematics.

Realizing the universal significance of Brahman from the prevailing concept of modern science is not easy because modern science has introduced domain-based understanding of material science. It is not possible to develop unification of materials science and spiritual science while carrying two different sciences for macro domain and micro domain. Any attempt to unify all sciences is feasible after harmonizing the macro domain physics and the micro domain physics. Only then the domain free laws of nature can be extended to micro-micro domain physics & macro-macro domain physics to bring successes in unification of sciences. The significance of Brahman and vital Vedic Mantras such as Shanti Mantra focusing on uniformity of nature in different domains have a great role in unifying sciences.

Why Shanti mantra?

Any deep thought or devotional prayer associates interaction of mental faculty with the universe. The physical body supplements the reactants (micro-micro-particles) to the mental faculty to meet the need of the thought process. In the excited state of mind or body, any directional deep thinking is hindered. Hence to calm down both, there is a need for Shanti Mantra. Understanding of the Mantra increases the effectiveness of the action towards peace by rendering the mind and body aligned towards the peace process.

Shanti Mantra reveals the property of space

The complete universe comprises the invisible universe and the visible universe. Both visible and invisible universes are two components of the complete universe having coexisting structures. The visible universe comprises atomic and subatomic particles thus referred to as the material world. On the other hand, the invisible universe comprises micro-micro domain particles (light particles) that's insignificant matter value (mass) falls below the detection level of modern science thus referred to as spiritual science. Though, both the material world and spiritual world have co-existence but the material world due to easy accessibility becomes nearer to us and the invisible world being difficult to perceive remains away from us. This is the reason for using 'that' for the unseen world (spiritual world) and using 'this' for the seen world (material world).



Both material world and the spiritual world comprise mass and space therefore the mass-space interaction remains invariant in the material world and the spiritual world which imply Brahman is present in material world and spiritual world.

The visible universe (material world) is precipitated from the complete invisible universe which is a homogeneous mixture of mass and space. If the full visible universe is taken out from the complete (full) universe then also the universe remains full with the invisible part of the universe. The vacancy created by removal of the visible universe is soon filled up by expansion of the adjacent space medium thus making it remain full. The Shanti Mantra has a far-reaching conception of physical space and its properties. The physical significance of the mantra is as follows.

Space is compressible and can expand infinitely.

High space density (space content per unit volume) with invisible high number density of space matter particles can precipitate visible forms of matter (mass-space integral system). The invisible universe remains full even after precipitation of the visible universe out of it. This is like the chamber containing humid air remaining full even after precipitation of water droplets discussed above.

Any gas is essentially space containing dispersed space matter particles. In air/gas the space matter particles are atoms and molecules. Space containing electrons as space matter particles is called electronic gas. Space free from atoms, molecules and subatomic particles is a space fluid containing particles of micro-micro domain particles as space matter particles. Any flow of space fluid or movement of objects disturbs the system hence Shanti Mantra also contributes towards the basic laws of gas.

Conclusion

Understanding any work function increases the efficiency of working. The functioning efficiency of the mind increases by stress relieving. It is understandable how the working efficiency of a man drops while carrying some mental stress. The powers of Shanti Mantra can be harnessed in every aspect of life. This is especially important for devotional meditation, chanting mantra, and professional deep thinkers to maximize output. One should take advantage of chanting the Shanti Mantra as it helps in every aspect of life. Shanti Mantra also contributes towards the cause of the laws of nature.

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